AMENDMENTS

In the Claims

1-17.   (Cancelled)

18.   **(Currently Amended)** A method comprising:

executing one or more tasks within each of a plurality of nodes of a network ~~to~~

~~dynamically generate:~~ **, wherein**

said plurality of nodes are interconnected by one or more links,

said executing comprises

generating

first data identifying at least one node of said plurality of nodes at

which, said first data comprising at least one of:

insert data is added, wherein said insert data is data

associated with said each of said plurality of nodes,

and

dropped data is deleted, wherein said dropped data is data

associated with said each of said plurality of nodes,

and

second data indicating a format of in-transit data being transmitted

over said network**, and**

requesting, from at least one other node of said plurality of nodes, a

format of data over a link of said one or more links attached to

said at least one other node of said plurality of nodes, and

said second data is configured to indicate a format of in-transit data being

transmitted over said one or more links;

~~dynamically~~ identifying a destination node of said in-transit data; [[and]]

transmitting said in-transit data to said destination node using said first data and said

second data**; and**

identifying said plurality of nodes of said network.

19.-20. **(Cancelled)**

21.　(Currently Amended) The method of claim [[19]] 18, wherein said insert data comprises, data received by said each of said plurality of nodes from said network, and said dropped data comprises data transmitted from said each of said plurality of nodes to said network.

22.　(Currently Amended) The method of claim [[19]] 18, wherein said executing comprises requesting at least one of:

said insert data from said node of said plurality of nodes at which insert data is being added; and

said dropped data from said node of said plurality of nodes at which dropped data is being deleted.

23.　(Cancelled)

24.　(Currently Amended) The method of claim [[23]] 18, wherein said requesting comprises:

requesting at least one of a synchronous transport signal type data and a synchronous transport module type data.

25.　(Currently Amended) The method of claim [[20]] 18, wherein said network satisfies at least one of:

a first condition wherein, to prevent misconnection in case of failure, traffic is:

switched by dispatching said in-transit data from a failed link to a redundant link and

squelched between said one or more links, and

a second condition wherein said in-transit data being transmitted over each of said one or more links is re-transmitted in data buckets to at least one predetermined node from said network at regular intervals of time.

26.　(Previously Presented) The method of claim 25, wherein,

said network satisfies said first condition, and

said executing one or more tasks within each of said plurality of nodes to generate said first data comprises,

performing squelching to prevent misconnection.

27.   (Previously Presented) The method of claim 25, wherein,

said network satisfies said second condition, and

said executing one or more tasks within each of said plurality of nodes to generate said

first data comprises,

for each data bucket, identifying at least one of:

said plurality of nodes on which insert data is being added via said each data

bucket; and

said plurality of nodes on which dropped data is being deleted via said each data

bucket.

28.   (Currently Amended) The method of claim [[19]] 18, further comprising:

detecting a failure on a first link of said one or more links on said node of said plurality

of nodes communicating said in-transit data;

identifying a redundant link from said node communicating said in-transit data to said

destination node; and

switching traffic in response to said detecting by switching said in-transit data from said

first link to said redundant link of said one or more links.

29.   (Previously Presented) The method of claim 28, wherein said executing one or more tasks
within each of said plurality of nodes comprises executing said one or more tasks within each of
said plurality of nodes before said failure occurs.

30.   (Currently Amended) An apparatus comprising:

means for identifying a plurality of nodes of a network, wherein said plurality of nodes

are interconnected by one or more links; [[and]]

means for executing one or more tasks within each of said plurality of nodes to

dynamically generate: , wherein

means for executing comprises means for generating

first data identifying at least one node of said plurality of nodes at which,

insert data is added, wherein said insert data is data associated with

said each of said plurality of nodes, or

erase is deleted, wherein said dropped data is data associated with

said each of said plurality of nodes[[;]] **,** and

second data indicating a format of in-transit data being transmitted over

said one or more links**, and**

said insert data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said

network, and

data transmitted by said each of said plurality of nodes to said

network;

means for ~~dynamically~~ identifying a destination node of said in-transit data; [[and]]

means for transmitting said in-transit data to said destination node using said first data

and said second data**; and**

means for requesting, from at least one other node of said plurality of nodes, a

format of data being transmitted over a link of said one or more links

attached to said at least one other node of said plurality of nodes.

31.   (Cancelled)

32.   (Currently Amended) The apparatus of claim [[31]] **30**, wherein said means for
executing comprises:

means for requesting, said insert data from said node of said plurality of nodes at which

insert data is being added; and

means for requesting said dropped data from said node of said plurality of nodes at which

dropped data is being deleted.

33.   (Cancelled)

34.   (Currently Amended) The apparatus of claim [[33]] **30**, wherein said means for
requesting comprises:

means for requesting at least one of a synchronous transport signal type data and a

synchronous transport module type data.

35.   (Currently Amended) The apparatus of claim [[31]] 30, wherein said network satisfies at least one of:

        a first condition wherein, to prevent misconnection in case of failure, traffic is:

                switched by dispatching said in-transit data from a failed link to a

            redundant link and

                squelched between said one or more links; and

        a second condition wherein said in-transit data being transmitted over each of said one or

            more links is re-transmitted in data buckets to at least one predetermined node

            from said network at regular intervals of time.

36.   (Previously Presented) The apparatus of claim 35, wherein,

        said network satisfies said first condition, and

        said means for executing one or more tasks within each of said plurality of nodes to

            generate said first data comprises,

            means for performing squelching to prevent misconnection.

37.   (Previously Presented) The apparatus of claim 35, wherein,

        said network satisfies said second condition, and

        said means for executing one or more tasks within each of said plurality of nodes to

            generate said first data comprises, for each data bucket, means for identifying:

                at least one of said plurality of nodes on which insert data is being added via said

                    each data bucket; or

                at least one of said plurality of nodes on which dropped data is being deleted via

                    said each data bucket.

38.   (Currently Amended) The apparatus of claim [[31]] 30, further comprising:

        means for detecting a failure on a first link of said one or more links on said node of said

            plurality of nodes communicating said in-transit data;

        means for identifying a redundant link from said node communicating said in-transit data

            to said destination node; and

        means for switching traffic in response to said detecting by switching said in-transit data

            from said first link to said redundant link.

39. (Previously Presented) The apparatus of claim 38, wherein said means for executing one or more tasks within each of said plurality of nodes comprises means for executing said one or more tasks within each of said plurality of nodes before said failure occurs.

40. **(Currently Amended)** A network node comprising:

an interface to couple said network node to a network, wherein said network comprises a plurality of nodes interconnected by one or more links and said plurality of nodes comprises said network node;

a timing communications and control processor configured to:

identify said plurality of nodes, and

execute one or more tasks within network node ~~to dynamically generate:~~ **,** ·

wherein

said timing communications and control processor is configured to

perform said execution by virtue of being configured to

generate

first data identifying at least one node of said plurality of nodes at which,

insert data is added, wherein said insert data is data associated with said each of said plurality of nodes; or

dropped data is deleted, wherein said dropped data is data associated with said each of said plurality of nodes, and

second data indicating a format of in-transit data being transmitted over said one or more links**, and**

said insert data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said network, and

data transmitted by said each of said plurality of nodes to said network;

~~dynamically~~ identify a destination node of said in-transit data; [[and]]

communicate said in-transit data to said destination node using said first data and

said second data; **and**

request, from at least one other node of said plurality of nodes, a format of

data being transmitted over a link of said one or more links attached

to said at least one other node of said plurality of nodes.

41.   (Cancelled)

42.   (Currently Amended) The network node of claim [[41]] <u>40</u>, wherein said timing
communications and control processor configured to execute one or more tasks comprises:

a timing communications and control processor configured to:

request, from at least one other node of said plurality of nodes, said insert data from said

node of said plurality of nodes at which insert data is being added and said

dropped data from said node of said plurality of nodes at which dropped data is

being deleted.

43.   (Cancelled)

44.   (Currently Amended) A machine-readable storage medium having a plurality of
instructions executable by a machine embodied therein, wherein said plurality of instructions
when executed are configured to cause said machine to perform a method comprising:

identifying a plurality of nodes of a network, wherein said plurality of nodes are

interconnected by one or more links; and

executing one or more tasks within each of said plurality of nodes to ~~dynamically~~

generate:

first data identifying at least one node of said plurality of nodes at which,

insert data is added wherein said insert data is data associated with said

each of said plurality of nodes, or

dropped data is deleted wherein said dropped data is data associated with

said each of said plurality of nodes, and

second data indicating a format of in-transit data being transmitted over said one

or more links;

~~dynamically~~ identifying a destination node of said in-transit data; [[and]]

communicating said in-transit data to said destination node using said first data and said second data; **and**

requesting, from at least one other node of said plurality of nodes, data indicating a format of data being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes.

45.   (Previously Presented) The machine-readable storage medium of claim 44, wherein said insert data and said dropped data comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

46.   (Previously Presented) The machine-readable storage medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, said insert data from said node of said plurality of nodes at which insert data is being added and said dropped data from said node of said plurality of nodes at which said dropped data is being deleted.

47.   **(Cancelled)**